

# Users Manual

V 1.0



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# SYSTEM REQUIREMENTS & READER SPECS

SmartCAT™ can only be used with a computer utilizing Microsoft Windows.

Windows Mobile Device Center will automatically launch for users using Windows Vista and 7.

If you don't have Windows Mobile Device Center please download from the following link:

<http://www.microsoft.com/en-us/download/details.aspx?id=14>.

You must have Windows ActiveSync 3.7 or higher, if you are using Windows XP or earlier. Download ActiveSync 4.5 at:

<http://www.microsoft.com/en-us/download/details.aspx?id=15>

## READER SPECS

| Baseline Specifications       |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| RFID Reader                   | RFID UHF reader                                                        |
| Scanner                       | 1-D bar code                                                           |
| Networking Wire-less          | WLAN 802.11b/g                                                         |
| Communications                | USB host & client                                                      |
| Operating System              | Windows Mobile 6.5                                                     |
| Display                       | 3.5" color QVGA touch screen                                           |
| CPU                           | Marvel PXA320, 820MHz                                                  |
| Memory                        | 256MB RAM / 256MB ROM                                                  |
| Battery                       | 3,000 mAh lithium polymer                                              |
| Expansion Slot                | 1 Micro SD slot, 1 SIM slot                                            |
| Weight without gun battery    | 1.22 lbs / 0.55Kg                                                      |
| Weight with gun battery       | 1.42 lbs / 0.65KG                                                      |
| Dimensions without gun handle | 6.25" (L) x 3.1" (W) x 4.6" (H)<br>15.9cm (L) x 7.9cm (W) x 11.7cm (H) |

| Dimensions with gun handle | 6.25" x 3.1" (W) x 5.3" (H)<br>15.9cm (L) x 7.9cm (W) x 13.5cm (H) |
|----------------------------|--------------------------------------------------------------------|
| Scanner                    | 2-D bar code scanner                                               |
| Camera                     | 3 mega-pixel fixed focus with flash                                |
| Body Network               | Wireless Bluetooth v2.0, Class II (SPP)                            |
| Cellular Network           | Wireless HSDPA                                                     |
| Location Services          | GPS                                                                |
| Battery                    | Additional capacity<br>4,400mAh high capacity battery              |
| Physical Characteristics   |                                                                    |
| Ingress Protection         | IP65                                                               |
| Drop                       | 1.5 Meters (5 feet) - 6 axis (1 foot greater than MIL-STD-810 G)   |
| ESD                        | Contact ± 4KV / ± Air 8KV                                          |
| Humidity                   | 0-95% at 104°F / 40°C                                              |
| Operating Temp             | 14°F to 122°F / -10°C to 50°C                                      |

| Physical and Environmental Characteristics |                                                                        |
|--------------------------------------------|------------------------------------------------------------------------|
| Dimensions without gun handle              | 6.25" (L) x 3.1" (W) x 4.6" (H)<br>15.9cm (L) x 7.9cm (W) x 11.7cm (H) |
| Dimensions with gun handle                 | 6.25" x 3.1" (W) x 5.3" (H)<br>15.9cm (L) x 7.9cm (W) x 13.5cm (H)     |
| Weight without gun battery                 | 1.22 lbs / 0.55Kg                                                      |
| Weight with gun battery                    | 1.42 lbs / 0.65Kg                                                      |
| Ingress Protection                         | IP65                                                                   |
| Drop                                       | 5 feet (1.5 Meters) - 6 axis (1 foot greater than MIL-STD-810 G)       |
| Operating Temperature                      | 14°F to 122°F / -10°C to 50°C                                          |
| Storage Temperature                        | -20°F to 140°F / -30°C to 60°C                                         |
| Humidity                                   | 0-95% at 104°F / 40°C                                                  |
| ESD                                        | Contact ± 4KV / ± Air 8KV                                              |
| Performance Characteristics                |                                                                        |
| Processor                                  | Marvell™ PXA320 820MHz                                                 |
| Operating System                           | Windows Mobile 6.5                                                     |
| Memory                                     | 256MB RAM / 256MB ROM                                                  |
| Display                                    | 3.5" color QVGA touch screen                                           |
| Audio                                      | Phone Receiver; Earphone Jack                                          |

| Communication Port      | RS-232 serial port; USB 1.1                        |
|-------------------------|----------------------------------------------------|
| Expansion Slot          | 1 Micro SD slot, 1 SIM slot                        |
| Keypad                  | 29 Key                                             |
| Notifications           | Vibrator, Speaker, LED's                           |
| Power Supply            |                                                    |
| Main Battery            | Lithium ion 3.7V 3,000mAh; 4,400mAh in pistol grip |
| Backup Battery          | Lithium polymer 3.7V, 100mAh                       |
| Adapter                 | Input 100VAC ~ 240VAC; Output 5VDC 3A              |
| Network Characteristics |                                                    |
| Wireless LAN            | WLAN (802.11 b/g)                                  |
| Bluetooth               | Class2, v2.0 (SPP Only)                            |
| GPS                     | A-GPS with Internal Antenna                        |
| Antenna                 | Internal LAN and WLAN                              |
| Cellular Network        | Wireless HSDPA                                     |
| Data Capture Devices    |                                                    |
| Barcode Engine          | 1D Laser Scanner or 2D Imager                      |
| Camera                  | 3.0 mega-pixel autofocus with flash                |
| UHF 900MHz RFID Reader  |                                                    |
| Frequency               | 850MHz - 930 MHz                                   |
| Reading Range           | 0ft – 23ft/0m – 7m                                 |
| Writing Range           | 0ft – 10ft/0m – 3m                                 |
| Antenna Gain            | 2 dBi                                              |
| Speed                   | 62.5 kbps                                          |
| RF Output               | 1W EIRP                                            |
| Protocol                | EPC Gen2 ISO 18000 6C<br>ISO 18000 6B              |
| Multi-Reading           | Anti collision                                     |

## Case



## Included in Kit:

1. **Reader** pistol grip, hand strap and stylus come assembled
2. **Reader Leather Sleeve**
3. **Cradle** (docking station) for USB connection and charging reader battery
4. **Extra Battery** and **USB Sync Cable**
5. **12 Volt Car Charger, AC Charger, Adapter and AC Cable**
6. **Storage Compartment Area- Quick Start Guide**

## Located:



# KIT ACCESSORIES



Reader



Pistol Grip



Hand Strap



Stylus



Reader Cover Case



Cradle



Battery (2)



12 Volt Car Charger



Adaptor and AC Cable



USB Sync Cable



## APP ICONS



Windows Start Menu



Warning/Missing data/App not running



GPS signal NOT Acquired



GPS signal Acquired



Touch Screen Keyboard



Exclamation: Data Captured/Click to Review



Warning message to inform the user



Warning message to question the user



Required Field

## Introduction

SmartCAT™ is an all-in-one RFID-based capital asset tracking system. The fully programmable SmartCAT application (app) organizes asset data collected on the SmartCAT Windows Mobile-based ruggedized handheld **READER**.

**NOTE:** For basic **READER** use questions, please refer to the **READER** User Guide. You can find it at <http://www.SmartCATrfid.com/support/download>

## Initial Setup

Before utilizing SmartCAT, the admin must first customize the application by performing the following instructions. The application is configured by using spreadsheets on a PC and transferring the spreadsheet from the computer to the **READER**.

**NOTE:** It is recommended to use Microsoft Excel to perform the following tasks. Excel will be used as a spreadsheet example throughout this manual.

1. Connect the **READER** to the cradle and confirm that the **READER** is charged by pressing

the power button and checking the remaining battery on screen. Connect AC charger to the charger if the upper left hand light is red, the **READER** is charging, if it is green, the **READER** is charged. If not fully charged, keep the AC wire connected to the cradle and plugged in to continue charging.

2. With the **READER** in the cradle, plug the USB cable from the cradle to your computer (this can be done while the **READER** is charging).

### For Windows Vista and Newer - Windows Mobile Device Center Users

3. Once the USB cable is connected, 'Windows Mobile Device Center' will begin loading and the following screen will display on your computer. Click "Connect without setting up your device"

**NOTE:** Do not disconnect the USB while loading. Load time will depend on the speed of your computer.

4. Select "File Management" and "Browse the contents of your device"
5. Open the reader drive (*AlienHH> \*)

Go to Step 6



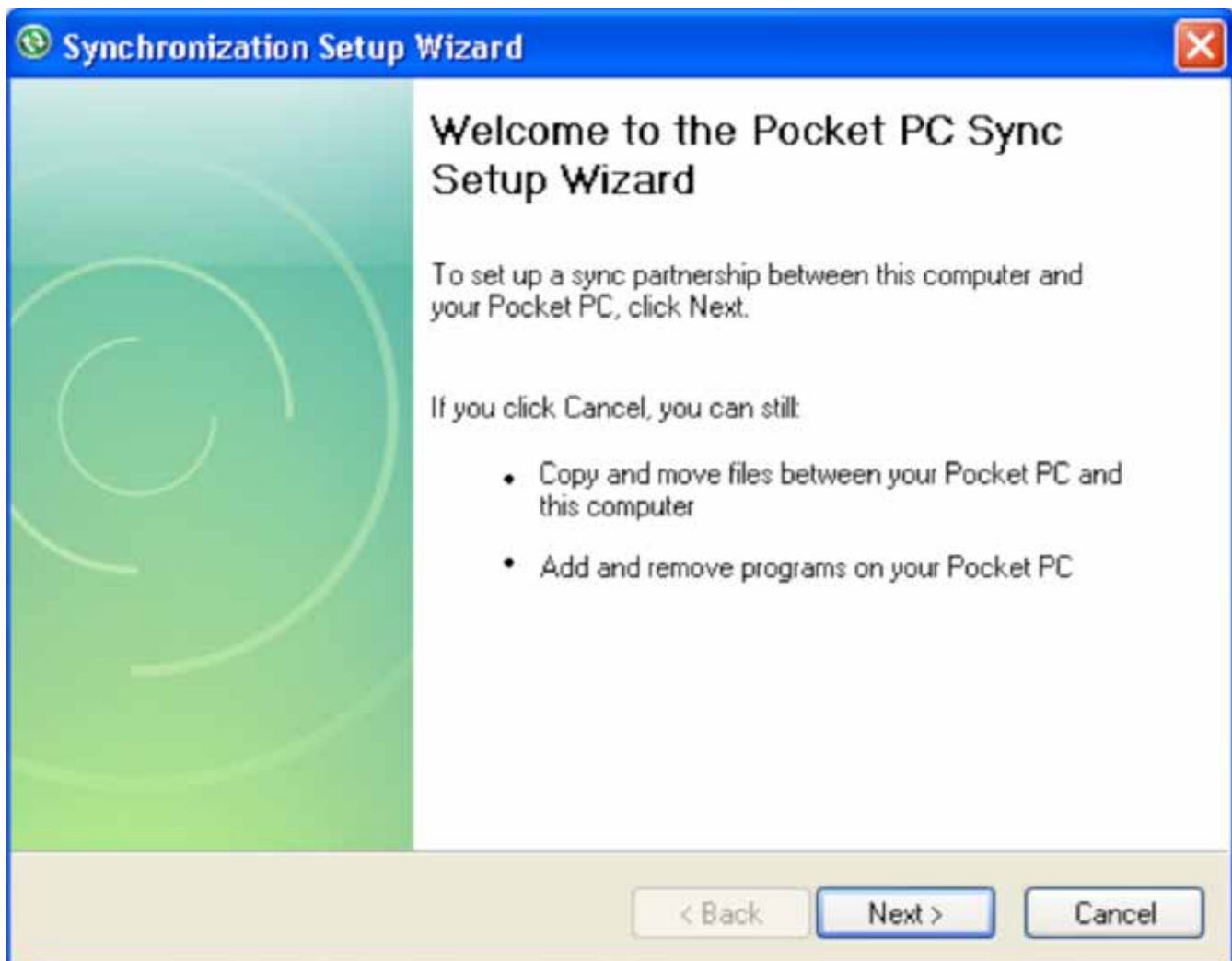
### For Windows XP and Older - ActiveSync 4.5 Users

3. Once the USB cable is connected, the following screen (Synchronization Setup Wizard) will display on your computer. Click "Cancel".

**NOTE:** Do not disconnect the USB while loading. Load time will depend on the speed of your computer.

4. Select "Explore" on the following screen (Microsoft Activesync)
5. Open the reader drive (*My Windows Mobile-Based Devices>\*)

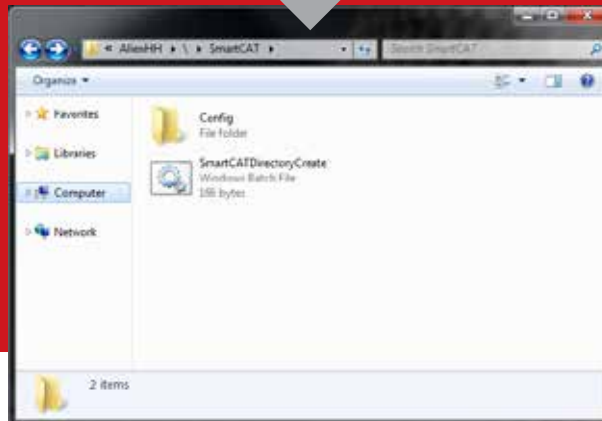
Go to step 6



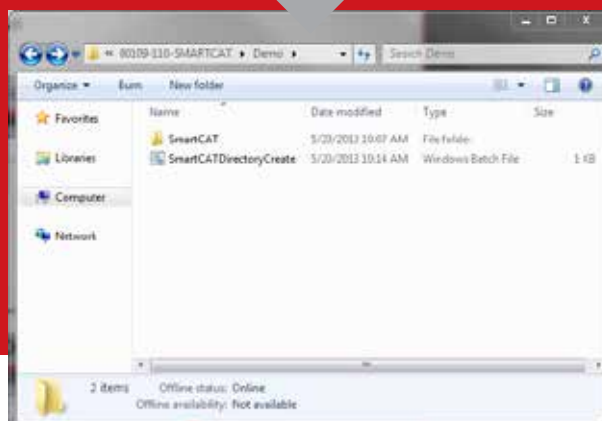
6. Open the SmartCAT™ folder.
7. Select a drive on your computer where you would like to store your SmartCAT files.
8. Copy and paste (or drag and drop) the **SmartCATDirectoryCreate** batch file from the device drive into the desired drive on your computer.
9. Double click and run the newly created **SmartCATDirectoryCreate** batch file on your computer.
10. Within a few seconds, a folder titled Smart-CAT will appear in the selected drive.
11. Open the **Master Config** folder, in the SmartCAT folder.
12. Cut and paste the **Config** folder from the device drive to this folder on your computer.  
*SmartCAT>Master Config Folder*

**NOTE:** It is extremely important to follow all steps and that you create a separate folder on your computer to store these files. Files can only be edited on a computer, not the READER itself.

## Reader Drive



## Computer Drive



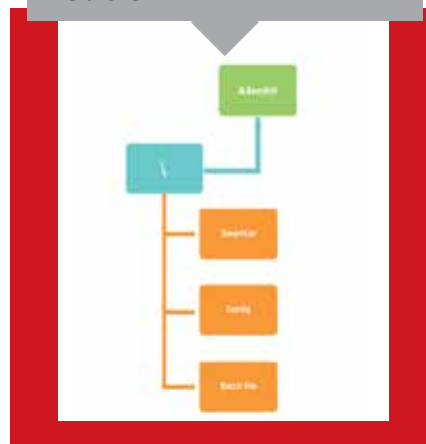
## Overview - Before Configuration

SmartCAT™ is configured by using spreadsheets located in the SmartCAT™ folder on your PC (if you do not have a SmartCAT folder on your PC, then refer to the **Initial Setup** section). MS Excel will be used as a spreadsheet example throughout this manual.

**NOTE:** The spreadsheets that you will be customizing will have example data filled in (first time use). Delete this data, unless otherwise stated, before customizing your information.

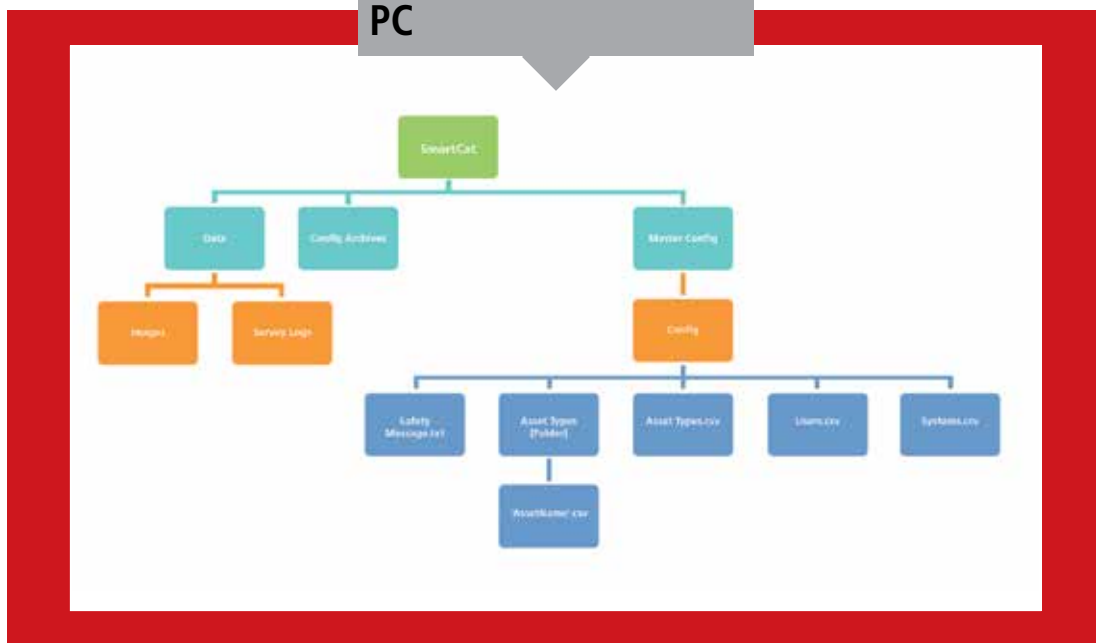
Before beginning your SmartCAT customization, familiarize yourself with the folders and files within the SmartCAT folder. Refer to the following chart and file/folder descriptions.

### Reader



This diagram explains how to navigate through the SmartCAT directories on your Reader.

### PC



This diagram explains how to navigate through the SmartCAT directories on your PC.

## Customizing the Configuration

This section is a brief overview of the configuration files and folders that the administrator will customize and upload to the READER.

### SmartCAT™ (folder)

The SmartCAT folder on your computer contains all of the following files and folders. This is where the administrator will create, edit and customize the configuration files and captured user data.

### Data (folder)

The Data folder contains the **Images** folder and **Log Files**.

### Images (folder)

The **Images** folder contains all pictures that have been taken using the SmartCAT application. The images are time and date stamped for your convenience and organization.

### Log Files (xml)

The **Log Files** contain collected survey data such as scanned automated data entries (RFIDs, barcodes, GPS).

### Config Archives (folder)

The **Config Archives** folder contains a backup of all of the previously created configuration files that the administrator has kept over time.

### Master Config (folder)

The **Master Config** folder contains the current Config folder. See the following **Config (folder)** section.

### Config (folder)

The Config folder contains the most current and up-to-date configuration files that are being read from SmartCAT. The configuration files in the **Config** folder are able to be edited by the admin. Before the administrator changes the configuration files in the **Config** folder, it is highly recom-

mended to save a time and dated copy of the current configuration files in the **Config Archives** folder.

After a change has been made to the current configuration files within the **Config** folder, the files must be saved and then transferred to the READER (refer to SmartCAT User Manual page 20).

### Users.csv (spreadsheet)

The Users.csv configuration file contains user information such as the user names and passwords for each user granted access to the READER. Each person that the administrator would like to grant SmartCAT access to should have a user name and password.

### System.csv (spreadsheet)

The System.csv file contains the license key and other optional information that the administrator can decide to customize, such as a system name, time out option, GPS (on/off) and low memory alert.

### Safety Message.txt (spreadsheet)

This is a customized message that the administrator would like to appear every time the user logs into the SmartCAT app on the READER. The user must accept the message before moving on.

### AssetTypes.csv (spreadsheet)

The **AssetTypes** spreadsheet lists the assets that the users will be collecting data for.

### AssetTypes (folder)

This folder is not to be confused with the .csv file 'AssetTypes.' This folder contains the survey files (survey questions) that belong to the asset types mentioned in the 'AssetTypes.csv' files.

### AssetName.csv (spreadsheet)

Contains information about the assets that are being tracked and/or inspected by the users. It holds questions and/or directions the administrator has set for a particular asset to be inspected.

## Customizing the "Users" Spreadsheet

1. On your PC, open:  
SmartCAT™>MasterConfig>Config>  
Users. csv

**NOTE:** There will be an example user name and password for your reference.

( **Username:** John **Password:** j123)

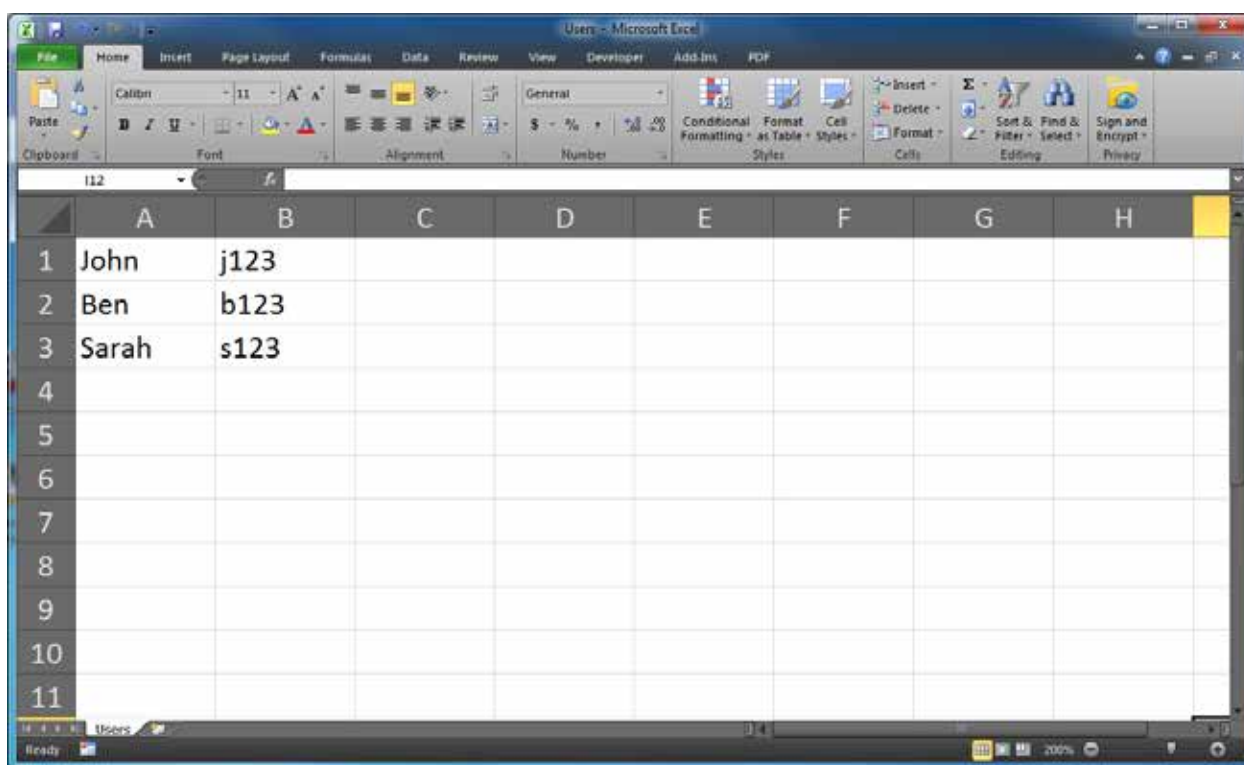
Delete this example before continuing.

2. List all user names in the rows of column **A**.
3. Enter your desired user passwords next to the corresponding user names in column **B**.
4. For your reference, you may also use column **C** to enter the users' full names. This informa-

tion will not show up on the reader.

**NOTE:** There is no restriction on length or the use of special characters (#\$%^&). It is, however, advisable to keep the password and user name restricted to alphanumeric entries in order to reduce complications while using the reader.

5. Save updates to file.
6. Press YES on the pop-up.
7. While closing the file, save again when prompted.



## Customizing the AssetTypes Spreadsheet

1. On your PC, open: SmartCAT™>Master Config>Config>AssetTypes.csv

**NOTE:** There will be an example asset type for your reference. Delete this example before continuing.

2. List all asset types that you would like to

track in column **A**.

3. Type the asset type file names next to the corresponding asset type in column **B**. The asset name should be the asset type ".csv" Refer to example spreadsheet image below.
4. Save updates to file.
5. Press YES on the pop-up.

|    | A             | B                | C | D | E | F | G |
|----|---------------|------------------|---|---|---|---|---|
| 1  | Fire Hydrant  | FireHydrant.csv  |   |   |   |   |   |
| 2  | Night Signing | NightSigning.csv |   |   |   |   |   |
| 3  | Water Valve   | WaterValve.csv   |   |   |   |   |   |
| 4  | Light Poles   | LightPoles.csv   |   |   |   |   |   |
| 5  |               |                  |   |   |   |   |   |
| 6  |               |                  |   |   |   |   |   |
| 7  |               |                  |   |   |   |   |   |
| 8  |               |                  |   |   |   |   |   |
| 9  |               |                  |   |   |   |   |   |
| 10 |               |                  |   |   |   |   |   |
| 11 |               |                  |   |   |   |   |   |

## Customizing the "Survey Questions" Spreadsheet

These will be the survey questions that appear on the READER while the user is tracking the asset.

1. Each asset type will require its own survey questions spreadsheet, and will need to be saved exactly as the asset type file name in column **B** on the **AssetTypes** spreadsheet for the corresponding asset.
2. On your computer, open:  
SmartCAT™>Master Config>Config>AssetTypes>Example.csv
3. Select **File Save As** and save this as a new file in the same folder. Save file as it appears in column **B** in the **AssetTypes** spreadsheet. Example: If the title in column **B** in the **AssetType** spreadsheet is "FireHydrant.csv" then save the spreadsheet as "FireHydrant"
4. In the drop down menu for save as type, select CSV (comma delimited).
5. Save
6. Click "OK" to save only the active sheet (pop-up warning).
7. Click YES when asked if you want to keep the workbook in this format (pop-up).

| Column                                     | *Header/Description                                                                                                                                                                                                                                                        |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b>                                   | <b>REQUIRED FIELD</b><br>Do you want this to be a required field? Type TRUE if you would like it to be a required field, leave blank if you would not like it to be a required field.                                                                                      |
| <b>B</b>                                   | <b>DATA COLLECTION FIELD</b><br>How would you like the data to be collected? Either: RFID, Barcode, Camera or leave it blank for text options (manual or drop down).                                                                                                       |
| <b>C</b>                                   | <b>LABEL</b><br>How would you like the instruction or question to appear? The text in this column will be the header of the column containing the data collected for this question or direction.<br><br>Make sure each question is unique in order to cleanly export data. |
| <b>D</b><br>(and every column following D) | <b>ANY DATA IN THE FOLLOWING COLUMNS ARE DROP DOWN OPTIONS</b><br>Drop down options. If left blank, a text box will appear on the READER for manual text entry as opposed to a drop down option.                                                                           |

8. Fill in the fields. Refer to the following chart:  
\*Header text may be changed if desired, but the action will stay the same.

**NOTE:** There will be a set of example questions for your reference. Delete this example (not the headers) before continuing.

9. Delete example rows 2-6. Enter desired data.
10. Save updates to file.
11. Press YES on the pop-up.

**Example spreadsheet on following page.**

## Example - Survey Questions Spreadsheet

|    | A        | B                       | C                          | D                                                   | E       | F               | G | H | I |
|----|----------|-------------------------|----------------------------|-----------------------------------------------------|---------|-----------------|---|---|---|
| 1  | REQUIRED | DATA COLLECTION OPTIONS | LABEL                      | ANY DATA IN FOLLOWING COLUMNS ARE DROP DOWN OPTIONS |         |                 |   |   |   |
| 2  |          | RFID                    | Scan RFID Tag              |                                                     |         |                 |   |   |   |
| 3  |          | Barcode                 | Scan Barcode (Optional)    |                                                     |         |                 |   |   |   |
| 4  | TRUE     |                         | Manufacturer               | Mueller                                             | Clow    | Other           |   |   |   |
| 5  |          |                         | Pump Nozzle                | Yes                                                 | No      |                 |   |   |   |
| 6  |          |                         | Hose Nozzle                | Yes                                                 | No      |                 |   |   |   |
| 7  |          |                         | Caps                       | Yes                                                 | No      |                 |   |   |   |
| 8  |          |                         | Operating nut              | Yes                                                 | No      |                 |   |   |   |
| 9  |          |                         | Stem                       | Yes                                                 | No      |                 |   |   |   |
| 10 |          |                         | Valve paint                | Yes                                                 | No      |                 |   |   |   |
| 11 |          |                         | Valve Seat                 | Yes                                                 | No      |                 |   |   |   |
| 12 |          |                         | Oil                        | Yes                                                 | No      |                 |   |   |   |
| 13 |          |                         | Packing                    | Yes                                                 | No      |                 |   |   |   |
| 14 |          |                         | O-Ring                     | Yes                                                 | No      |                 |   |   |   |
| 15 |          |                         | Greased                    | Yes                                                 | No      |                 |   |   |   |
| 16 |          |                         | Branch Valve               | Yes                                                 | No      |                 |   |   |   |
| 17 |          |                         | Branch Valve is Buried     | Yes                                                 | No      |                 |   |   |   |
| 18 |          |                         | Paint                      | Yes                                                 | No      |                 |   |   |   |
| 19 | TRUE     |                         | Water Condition            | Clear                                               | Murky   | Dark            |   |   |   |
| 20 | TRUE     |                         | Weep                       | Yes                                                 | No      |                 |   |   |   |
| 21 | TRUE     |                         | Flushed Minutes            | 1 to 5                                              | 5 to 10 | Greater than 10 |   |   |   |
| 22 |          |                         | Gallons                    |                                                     |         |                 |   |   |   |
| 23 |          | Camera                  | Take picture of any damage |                                                     |         |                 |   |   |   |
| 24 |          |                         |                            |                                                     |         |                 |   |   |   |
| 25 |          |                         |                            |                                                     |         |                 |   |   |   |

## Customizing the "System" Spreadsheet

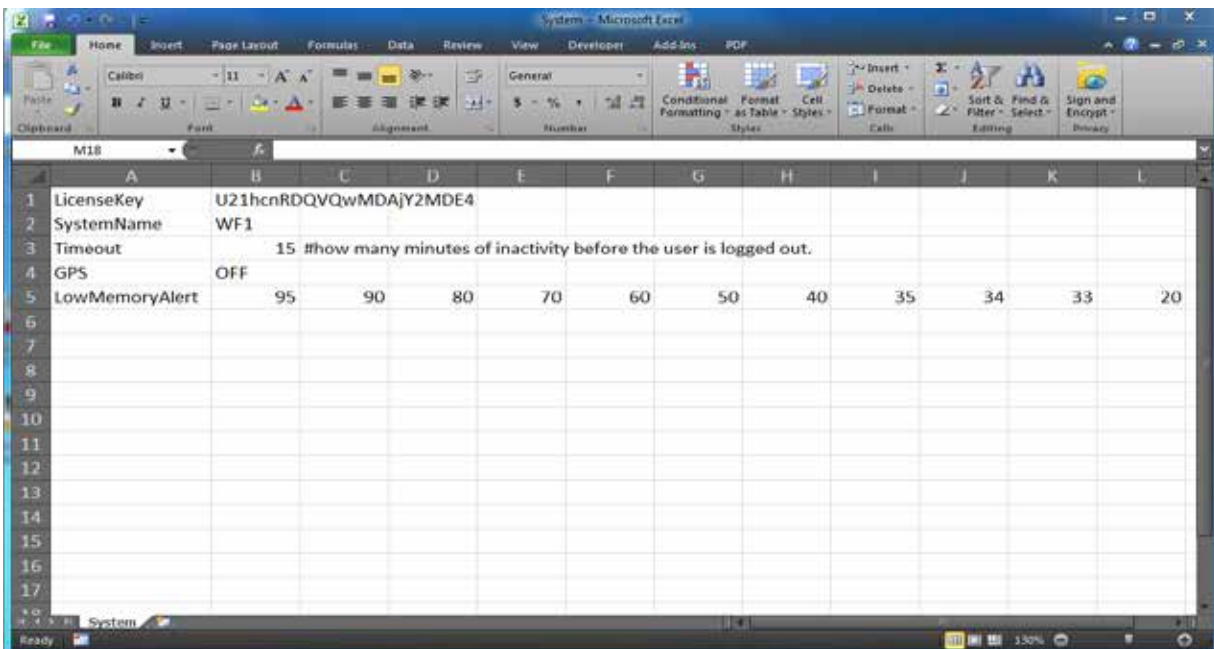
1. Open SmartCAT™>Master Config>Config folder>System.csv
2. Leave row **1**, column **A** as is (default text).

**NOTE:** Deleting column **A** will prevent the app from functioning. If column **A** is deleted, call the SmartCAT customer support center at: 1-855-SMRTCAT (767-8228).

3. Row **2**, column **B**, enter a name for the READER.
4. Row **3**, column **B**, enter the minutes of inactivity before the user is logged out of the session.

5. Row **4**, column **B**, select if you would like the GPS to be on or off. Type ON or OFF in this cell.
6. Row **5**, column **B**, enter percentage of memory storage capacity when you would like to have the alert message appear.
7. Save updates to file.
8. Press YES on the pop-up.

**NOTE:** Row **1**, column **A** is the only row that cannot be deleted and/or altered. All other columns and rows can be customized and/or rearranged.

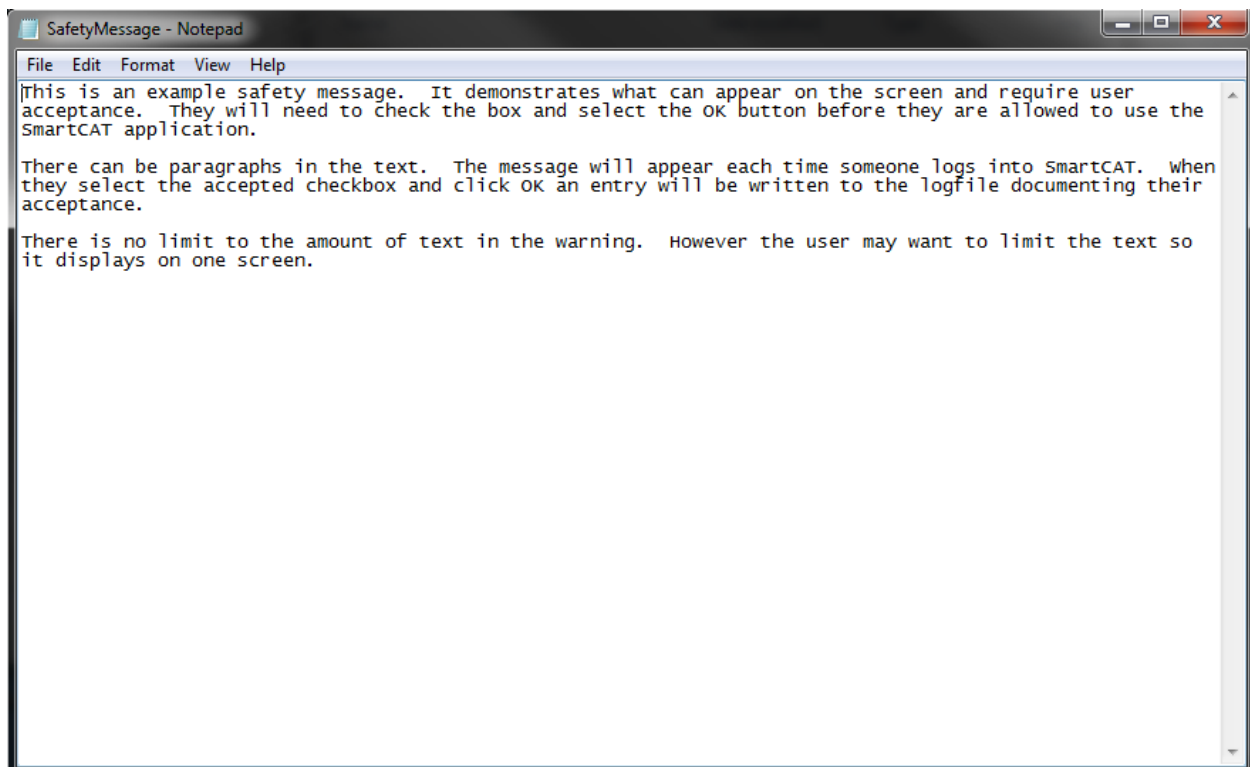


## Customizing the "SafetyMessage" text file

1. Open SmartCAT™>MasterConfig>Config>SafetyMessage.txt
2. A note pad will appear on the computer screen.
3. Delete existing sample text.
4. Fill in text that you would like the user to

see and accept every time they log into the SmartCAT app. If you would not like a safety message to appear, then delete the **SafetyMessage** folder on your computer.

5. Save updated message.



## Sync Files to Reader

### Transfer folders from PC drive to READER drive

Once all of your files and folders are customized, you will then transfer the SmartCAT files on your PC to the READER.

1. Copy the **Config** folder on your PC drive.

#### For Windows Vista and Newer - Windows Mobile Device Center Users

2. Paste the folder in the READER device drive:  
Computer>AlienHH>\>SmartCAT™.

#### For Windows XP and Older - ActiveSync 4.5 Users

2. Paste the folder in the READER device drive:  
Computer>Mobile Device>My Windows Mobile-Based Device>SmartCAT™.

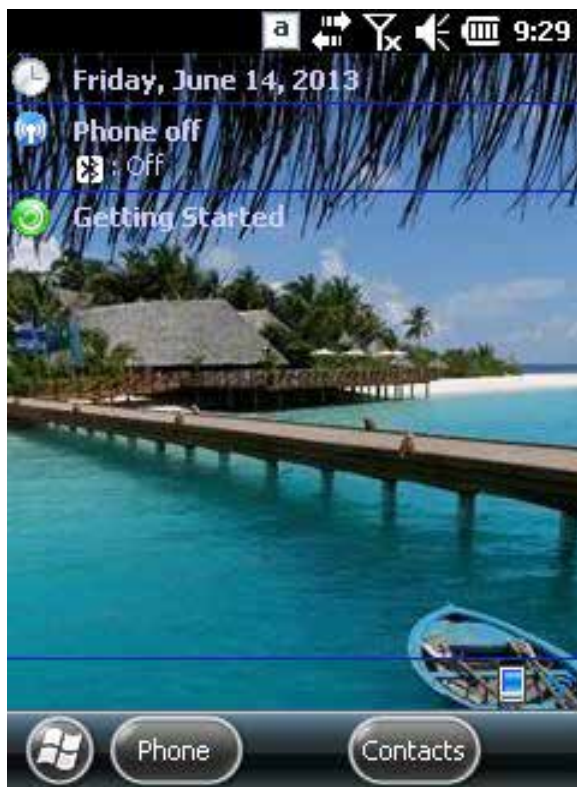


## Using the SmartCAT™ Application on the READER

Use the stylus pen to select information on the touch screen.

**NOTE:** The screen will black out after being idle for a certain amount of time. Press the power button to turn the screen back on. Refer to the READER User Manual to change the setting.

1. Turn on the READER. The following screen will display.



2. Select the Windows icon.

3. The Home screen will display. Select the SmartCAT icon.



4. Select your User Name from the drop down.
5. Select the keyboard icon and enter the appropriate password.



6. Select the **Login** button.
7. Read the safety message (skip this step if a safety message does not appear).
8. Select the **Accept** box.
9. Select OK.
10. Once logged in, select the Asset Type that you will be surveying in the Asset Type drop down.



11. Select **Start Survey**
12. Once the survey begins, the following screen will appear.



13. Answer questions from top to bottom. An asterisk "\*" before a question/command means that it is a required field. Refer to the following sections for instructions on how to fill out the RFID, Barcode and Camera options.

## RFID:

When RFID is selected, the following screen will display:



1. In the drop down box, select either Single Read, Multi Read or Multi Read/Multi Select.

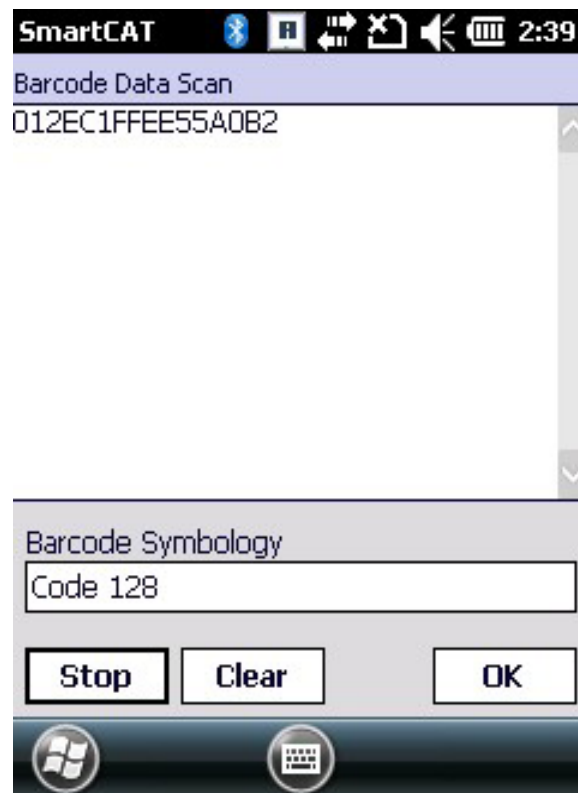
|                                     |                                                                 |
|-------------------------------------|-----------------------------------------------------------------|
| <b>Single Read</b>                  | Reads one RFID tag                                              |
| <b>Multi Read</b>                   | Reads multiple tags (user selects one)                          |
| <b>Multi Read/<br/>Multi Select</b> | Reads multiple tags (user able to select multiple tags at once) |

2. Point the READER in the direction of the RFID tag.
3. Either press the trigger on the pistol grip or select the scan button on the touch screen. If selecting multiple reads, you may need to press the trigger repeatedly until the desired tag(s) is selected.

4. If selecting multiple tags, select the desired tag(s) on the display screen.
5. Select **OK** on the display screen and move on to the remaining questions.

## Barcode:

When Barcode is selected, the following screen will display:



1. Point the READER at the Barcode.
2. Confirm that the right data has been captured.
3. Either press the trigger on the pistol grip or select the scan button on the touch screen.
4. Select **OK** on the display screen and move on to the remaining questions.

## Camera:

When Camera is selected, the following screen will display:



1. Point the READER at the object that you wish to take a picture of. View in the display screen.
2. Hold the READER still and press the hard **Enter** button on the reader keyboard
3. Hold the READER still for a few seconds after pressing the **Enter** button to avoid blurring the picture.
4. If satisfied with the picture, select **OK** on the display screen and move on to the remaining questions.

## Camera Settings:

1. Flash Operations
  - a. Within the Camera mode, select the "Menu" option on the windows bar at the bottom of the screen.

- b. Select "Flash" from the list of options
- c. Select "On"

## 2. ResolutionChange

- a. Within the Camera mode, select the "Menu" option on the windows bar at the bottom of the screen.
- b. Select "Resolution" from the list of options
- c. Select the desired resolution

Note: Higher resolution results in higher image file size.

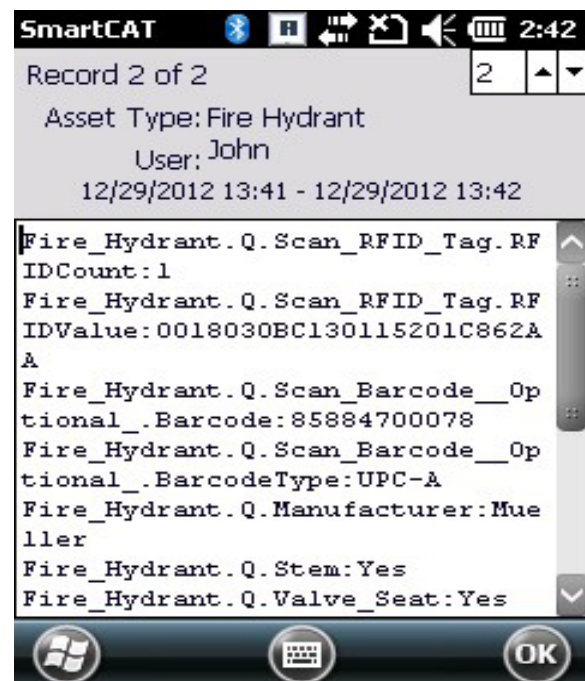
## After Survey Completion

Select either **Save** to save the survey; **Cancel** to cancel the survey; or **Review** to review the survey questions and answers.

If reviewing the survey, select **Back** to make changes or **Finish** to save the survey.

Once the survey is saved, the User is unable to make changes or go back.

The User now has the option to start a new survey, view survey log by selecting the **View Log** button or to exit out of the SmartCAT app.



1. Mount the READER to the cradle.
2. Connect the USB cable from the cradle to your computer USB port.

### **For Windows Vista and Newer - Windows Mobile Device Center Users**

3. Once the USB cable is connected, 'Windows Mobile Device Center' will begin loading and the following screen will display on your computer. Click "Connect without setting up your device"

**NOTE:** Do not disconnect the USB while loading. Load time will depend on the speed of your computer.

4. Select "File Management" and "Browse the contents of your device"
5. Open the reader drive (*AlienHH> \*)

Go to Step 7

### **For Windows XP and Older - ActiveSync 4.5 Users**

3. Once the USB cable is connected, the following screen (Synchronization Setup Wizard) will display on your computer. Click "Cancel".

**NOTE:** Do not disconnect the USB while loading. Load time will depend on the speed of your computer.

4. Select "Explore" on the following screen (Microsoft Activesync)
5. Open the reader drive (*My Windows Mobile-Based Devices> \*)

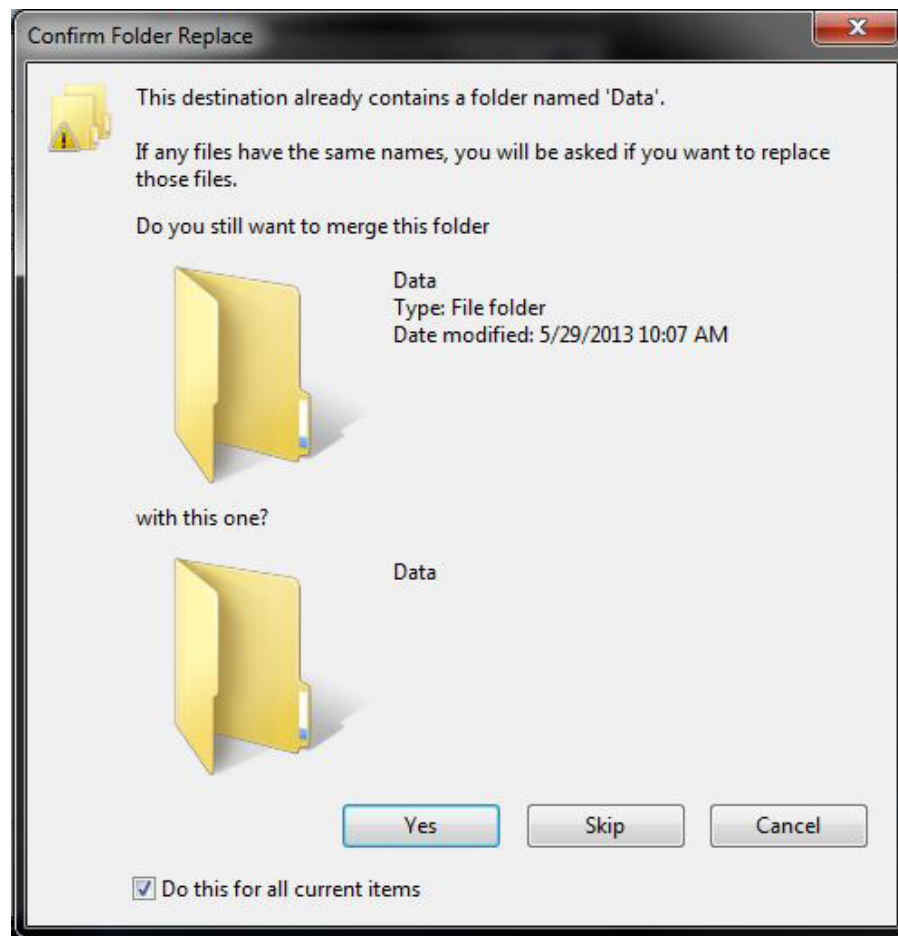
Go to step 7

7. Open **SmartCAT™** folder.
8. Cut the **Data** folder (right click on folder and select "cut").

**NOTE:** It is important to remove the old **Data** folder from your device. Copying the folder without deleting it will create a new log file for the next set of surveys, which will make organizing the folders more difficult.

9. Open the **SmartCAT** folder on your computer drive (Computer>SmartCAT).
10. Paste the **Data** folder into the **SmartCAT** folder (right click in drive and select "Paste"). The below screen will appear.
11. Check the "Do this for all current items" box.
12. Click YES.

13. Open the **Data** folder on your computer drive (Computer>SmartCAT>Data). Confirm that the newest log file is in the **Data** folder. Images captured will be in the **Images** folder. For convenience/organizational purposes, all files are date, time and device ID stamped.



## Convert Log Files to CSV

1. Open MS Excel.
2. Open the log file that you would like to convert (Computer>SmartCAT™>Data).
3. On the pop-up, make sure that "As an XML table" is selected.
4. Click OK.
5. Click OK, if the message "Excel will create a schema based on XML data" appears.
6. File>Save As
7. Name log file so that it is easy for you to identify, organize and recover in the future.
8. In the "Save as type" drop down, select CSV (Comma delimited) or any other format you prefer.
9. Click Save.
10. Click OK on pop-up.
11. Click Yes in next pop-up.

|    | A           | B           | C        | D                  | E            | F         | G                   | H           | I           | J                   | K       | L         | M                           | N            |
|----|-------------|-------------|----------|--------------------|--------------|-----------|---------------------|-------------|-------------|---------------------|---------|-----------|-----------------------------|--------------|
|    | Survey Date | Survey Time | Location | Surveyor           | Asset Type   | Condition | Fire Hydrant G.Scan | RFD Tag     | RFD Count   | Fire Hydrant G.Scan | RFD Tag | RFD Value | Fire Hydrant G.Manufacturer | Fire Hydrant |
| 1  | 06/06/2012  | 9:30        | John     | WFS-20130604120915 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 2  | 06/06/2012  | 9:30        | John     | WFS-20130604120925 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 3  | 06/06/2012  | 9:36        | John     | WFS-20130604120945 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 4  | 06/06/2012  | 9:40        | John     | WFS-20130604120956 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 5  | 06/06/2012  | 9:57        | John     | WFS-20130604121004 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | No        |                             |              |
| 6  | 06/06/2012  | 10:02       | John     | WFS-20130604121012 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 7  | 06/06/2012  | 10:11       | John     | WFS-20130604121028 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 8  | 06/06/2012  | 10:26       | John     | WFS-20130604121039 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 9  | 06/06/2012  | 10:33       | John     | WFS-20130604121050 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 10 | 06/06/2012  | 10:46       | John     | WFS-20130604121105 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 11 | 06/06/2012  | 10:51       | John     | WFS-20130604121110 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 12 | 06/06/2012  | 10:52       | John     | WFS-20130604121123 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 13 | 06/06/2012  | 11:18       | John     | WFS-20130604121133 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 14 | 06/06/2012  | 11:26       | John     | WFS-20130604121146 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 15 | 06/06/2012  | 11:43       | John     | WFS-20130604121156 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 16 | 06/06/2012  | 11:51       | John     | WFS-20130604121206 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 17 | 06/06/2012  | 12:04       | John     | WFS-20130604121207 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 18 | 06/06/2012  | 12:08       | John     | WFS-20130604121212 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 19 | 06/06/2012  | 12:18       | John     | WFS-20130604121232 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 20 | 06/06/2012  | 12:24       | John     | WFS-20130604121246 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 21 | 06/06/2012  | 12:28       | John     | WFS-20130604121254 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 22 | 06/06/2012  | 12:38       | John     | WFS-20130604121354 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 23 | 06/06/2012  | 12:46       | John     | WFS-20130604121406 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 24 | 06/06/2012  | 13:05       | John     | WFS-20130604121410 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 25 | 06/06/2012  | 14:05       | John     | WFS-20130604121433 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 26 | 06/06/2012  | 14:30       | John     | WFS-20130604121440 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 27 | 06/06/2012  | 14:34       | John     | WFS-20130604121455 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 28 | 06/06/2012  | 14:39       | John     | WFS-20130604121506 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 29 | 06/06/2012  | 14:47       | John     | WFS-20130604121520 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 30 | 06/06/2012  | 14:51       | John     | WFS-20130604121530 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 31 | 06/06/2012  | 15:02       | John     | WFS-20130604121539 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 32 | 06/06/2012  | 15:06       | John     | WFS-20130604121550 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 33 | 06/06/2012  | 15:21       | John     | WFS-20130604121609 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |
| 34 | 06/06/2012  | 15:24       | John     | WFS-20130604121614 | Fire Hydrant | WFS       | 1.100018.30.000000  | 1.000000000 | 1.000000000 | Muelter             |         | Yes       |                             |              |

## Before Calling for Service

Review the following troubleshooting guide and FAQ section before calling for service.

SmartCAT™ Customer Service: **1-855-SMRTCAT** (767-8228).

| Problem                                                                                                        | Cause                                                                      | Solution                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Time and date on the READER changes every time the battery runs out.                                           | This is normal operation.                                                  | Always keep your READER charged to avoid this issue. Every time the READER battery dies, it is very important to check the time and date before use.                                                                                     |
| The screen on the READER locks every time a picture is captured.                                               | The READER is sensitive to low lighting conditions.                        | In order to avoid data loss, switch on your flash and adjust the resolution on the camera to the maximum setting in low lighting conditions. This will help prevent a screen lock and system crash. Refer to pg. 24 in this User Manual. |
| Unable to save configuration file.                                                                             | The READER's Window CE operating system does not allow direct editing.     | Copy files that you would like to edit in the SmartCAT folder on your PC. Edit the files from your PC and then transfer them to your READER. Refer to pg. 11 of this User Manual.                                                        |
| The READER loses charge in under five hours.                                                                   | Certain functions on the READER use more power than others.                | Keep the extra battery charged in the cradle for backup.                                                                                                                                                                                 |
| READER is mounted in the cradle but is not charging.                                                           | The cradle is not plugged in with the charging adapter.                    | The READER can only be charged using a charging adapter; and does not charge with the USB cable in the PC. The cradle needs to be plugged into either the wall outlet or car adapter.                                                    |
| READER displays an error that says "LicenseKey must be entered in the system config file for SmartCAT to run." | A LicenseKey was not entered properly in the config files before transfer. | Refer to the <b>Customizing the "System" Spreadsheet</b> section in this manual. (pg. 17)<br><br>If the steps in this section were preformed according, contact the SmartCAT Customer Service Center at: 1-855-SMRTCAT (767-8228).       |

### **Does SmartCAT™ also work as asset management software?**

No. SmartCAT™ is an asset tracking and data collecting application. Data exports in '.csv' or '.xml' format and can be sorted and compiled in a simple database that reads and manipulates software such as Microsoft Excel.

### **Will the READER automatically sync to the computer when connected?**

No. The files have to be transferred manually in order to load data from your computer to the READER and vice versa.

### **Can I export data from SmartCAT into CSV format?**

Yes; though, this must be done manually through MS Excel.

### **What format does SmartCAT store data in**

SmartCAT collects and stores data in Extensible Markup Language (XML) format. XML is a universal format that is both human and machine readable, and can be exported into a wide range of software programs including, but not limited to, MS Excel.

### **Can the SmartCAT application run on other readers?**

No. The SmartCAT app was developed specifically for the READER in which it is installed. Any unauthorized copying or installation of the SmartCAT software will not only limit the app's functionality but will also be an infringement of copyright laws.

### **Are there any limitations to the number of data capture options able to be used in a survey?**

No.

### **Is there a multilingual version of this device/application available?**

No. The app is only available in English but has been designed to be as universally understood as possible.

### **Can configuration files be accessed through the reader?**

No. The config files that populate the data on the app cannot be opened with your reader. These files can only be accessed through the administrator's computer.

### **What Barcode types can I read using the application?**

The application is designed to recognize all 1D and 2D barcodes.

### **Can the SmartCAT application write tags?**

No. SmartCAT cannot be used to write and encode RFID tags; however, there are other options available on your READER for writing tags. Additional information about writing tags using the reader can be found in the READER user manual at: <http://www.SmartCATrfid.com/support/download>

SmartCAT Technical Support also provides information on encoding tags. <http://www.smartcatrfid.com/support/tag-encoding>

**I can't copy my configuration file to the reader. I keep getting the error message "Cannot copy 'File'. The device has either stopped responding or has been disconnected".**

Make sure that you didn't accidentally open the file on the reader or have the software running on the reader. Either close the configuration file or exit the software on the reader. The file should copy just fine now.

**Can the data collected by SmartCAT be exported into an asset management software?**

Yes. SmartCAT saves the data collected in XML format that can be converted into CSV or any other format to best suit your needs.

We have found that CSV and Excel worksheets work best for asset management softwares. You can find the procedure to convert XML to CSV or other file formats in the SmartCAT user manual. Refer to the section 'Convert Log Files to CSV' on Page 27.

**Can the READER wirelessly sync to my computer?**

Yes. The READER is Wi-Fi capable and you can also use a Sim Card to attain network connectivity but these are features that SmartCAT does not deal with.

If you need assistance please contact SmartCAT tech support or refer to the READER user manual that can be found

at: <http://www.SmartCATrfid.com/support/download>.

**My reader wont connect to my computer with Windows 7 OS. What should I do?**

Please make sure you have "Windows Mobile Device Center" on your computer. If not, download it from the following link

<http://www.microsoft.com/en-us/download/details.aspx?id=14>.

If you have "Windows Mobile Device Center" and the reader still refuses to connect, cold reset your device. This can be done by pressing the power and reset button together until the unit restarts.

**My data export is duplicated and is not lined up in order. What should I do?**

Please make sure that the questions in the "Survey Questions" spreadsheet are unique. If you need to have the same question asked repeatedly in the same survey, please number the questions in order to capture and export data cleanly.